

## IN THE CLAIMS

1. (Currently amended) A self-routing communication network, comprising:
  - a plurality of nodes;
  - a plurality of star couplers each having a plurality of inputs and a plurality of outputs;
  - and
  - communication paths coupled between the plurality of star couplers and the plurality of nodes for communication therebetween of frames of information,wherein
  - the communication paths include at least one alternative communication path;~~and~~
  - the star couplers each include means for an input detector to sense ~~sensing~~ which input of its inputs of the star coupler first receives a frame of information and for passing only the frame of information first received; and
  - the frames of information each have a frame-start-sequence, and the star couplers each further include a frame-start-sequence changer to change the frame-start-sequence before outputting the frame such that an interconnection failure is diagnosable by analyzing the frame-start-sequence.
2. (Cancelled).
3. (Currently amended) The self-routing communication network of claim 12, wherein the ~~means for changing the frame-start-sequence~~ changer comprises a shortener to reduce ~~means for reducing~~ the size of the frame-start-sequence by a predetermined amount.
4. (Original) The self-routing communication network of claim 3, wherein the predetermined amount comprises 2 bits.
5. (Currently amended) The self-routing communication network of claim 3, wherein the shortener means for reducing the size of the frame start sequence comprise ~~comprise~~ comprises a clock means for to time ~~timing the~~ an occurrence of the predetermined amount of the frame-start-sequence.

6. (Currently amended) The self-routing communication network of claim 3, wherein the shortener means for reducing the size of the frame-start sequence ~~comprise~~ comprises a bit ~~detection means for detector to detect~~ detecting the ~~an~~ occurrence of the predetermined amount of the frame-start-sequence.

7. (Previously amended) The self-routing communication network of claim 1, wherein the network is based on a deterministic media access scheme.

8. (Previously amended) The self-routing communication network of claim 1, wherein the network is arranged for real-time communication.

9. (Currently amended) A star coupler for use in a self-routing communication network having a plurality of nodes coupled via communication paths and a plurality of star couplers for communication of frames of information ~~between the nodes of frames of information~~, the star coupler having a plurality of inputs and a plurality of outputs, wherein the star coupler includes ~~means for an input detector to sense~~ sensing which input ~~of it's~~ the plurality of inputs of the star coupler first receives a frame of information and for passing only the frame of information first received, and the frames of information each have a frame-start-sequence, and the star coupler further includes ~~means for a frame-start-sequence changer to change~~ changing the frame-start-sequence in a predetermined manner before outputting the frame of information, whereby interconnection failure in the network is diagnosable ~~may be diagnosed by analysing~~ analyzing ~~from~~ the frame-start-sequence.

10. (Currently amended) The star coupler of claim 9, wherein the ~~means for changing the~~ frame-start-sequence changer in a predetermined manner comprises a shortener to ~~means for reducing~~ reduce the size of the frame-start-sequence by a predetermined amount.

11. (Original) The star coupler of claim 10, wherein the predetermined amount comprises 2 bits.

12. (Currently amended) The star coupler of claim 10, wherein the shortener ~~means for reducing the size of the frame-start sequence~~ comprise comprises a clock ~~means for to time~~ timing the ~~an~~ occurrence of the predetermined amount of the frame-start-sequence.

13. (Currently amended) The star coupler of claim 10, wherein the shortener ~~means for reducing the size of the frame-start sequence comprise~~ comprises a bit ~~detection means for detector to detect~~ detecting the ~~an~~ occurrence of the predetermined amount of the frame-start-sequence.

14. (Previously amended) The star coupler of claim 9, wherein the network is based on a deterministic media access scheme.

15. (Previously amended) The star coupler of claim 9, wherein the network is arranged for real-time communication.